National Institute of Environmental Health Sciences

The effects of climate variables on the outbreak of dengue in Queensland 2008-2009

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Abstract:

Outbreaks of dengue occur in Queensland, Australia nearly every summer. In 2008-2009, there was an unusually large, protracted outbreak of dengue, comprised of 1,200 cases. We investigated the weather variables and their contribution to the 2008-2009 dengue outbreak in Queensland. Case data were obtained from the Communicable Disease Branch of Queensland Health for 2000-2010 for the towns of Cairns and Townsville. Monthly weather data (rainfall, maximum temperature, minimum temperature) and Southern Oscillation Index (SOI) was obtained from the Bureau of Meteorology (BOM). We used a negative binomial model to test associations between these variables and dengue. Lagged models were also created for one, two and three months. Our models suggest all weather variables but not the SOI were associated with dengue in both Cairns and Townsville, without a lag (p

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

Tropical

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Dengue

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified